The LDC Story:
A Focus on Safety Also Benefits Our Environment

The American Gas Association (AGA) commends the U.S. Department of Energy (DOE) for bringing together a diverse and distinguished group of stakeholders for a credible and fact-based discussion about opportunities to modernize the natural gas infrastructure, supporting President Obama's and Secretary Moniz's vocal advocacy of the many benefits of our domestic abundance of natural gas and the significant role it will play in our nation's economy going forward.

America's clean and secure energy future will be built upon the foundation of an ever expanding natural gas pipeline system that delivers clean natural gas to Americans safely and reliably every day. Today, there are 2.4 million miles of natural gas pipelines. Throughout the coutnry, mains and services are being put into the ground daily to ensure more homes and businesses are able to take advantage of this environmentally friendly resource.

Answering the Call

In 2011, then U.S. Secretary of Transportation Ray LaHood brought together federal, state and industry stakeholders to discuss steps for making continued improvements to the safety and efficiency of the nation's pipeline infrastructure, and, in particular, accelerating the replacement of pipelines no longer fit for service so as to ensure a safe and reliable system for the next 100 years. Secretary LaHood's Call to Action directed operators of local gas distribution pipelines to evaluate the risks on their pipeline systems to determine their fitness for service and take action to address those risks.

To be certain, America's natural gas utilities have heeded the call.

In October 2011, the American Gas Association (AGA), which represents more than 200 local energy companies that deliver clean natural gas throughout the United States, released its "Commitment to Enhancing Safety", a report that details actions that are being taken by AGA or individual operators that go above and beyond current regulation to help ensure the safe and reliable operation of the nation's network of natural gas pipelines.

One of the most important requests made by Secretary LaHood was that utilities accelerate the replacement of pipelines no longer fit for service. He asked utilities and state public utility commissions to work together to identify ways to facilitate this work. Given that the safety needs of each state and natural gas utility are different, this required a concerted effort on behalf of the industry, regulators and state legislators in a number of states to identify and put into place innovative rate structures that fit their unique circumstances.

While all natural gas utilities upgrade and modernize their infrastructure using risk-based integrity management programs, 38 states now have specific rate mechanisms that foster accelerated replacement of pipelines no longer fit for service. In the case of the 12 without such programs, several no longer have cast iron pipelines in their systems and maintain only small amounts of bare steel.

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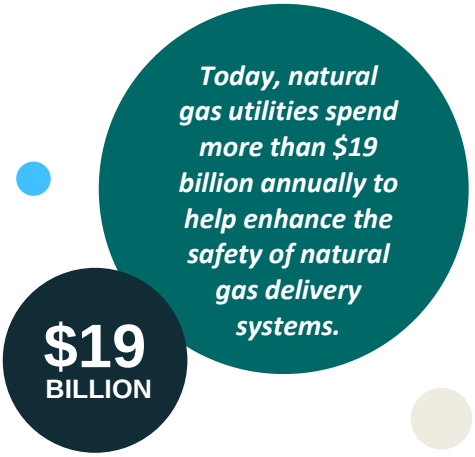
According to the U.S. Department of Transportation, the pipeline network that carries natural gas to more than 177 million Americans is the safest energy delivery system in the nation.

Even with the historically excellent performance of our distribution network, natural gas utilities remain vigilant and committed to continually upgrading this crucial infrastructure. Today, natural gas utilities spend more than $19 billion annually to help enhance the safety of natural gas delivery systems – and this number will continue to increase as commissions continue approving accelerated replacement programs. Modernization efforts will continue to build upon the industry's exceptional track record of safe and reliable service.



Over the course of the last three decades, natural gas utilities have installed modern plastic pipes at a rate of 30,000 miles per year and installed cathodically protected coated steel mains at 1,500 miles per year, both connecting new customers and upgrading existing pipeline infrastructure. They have also added nearly 600,000 miles of distribution mains and service lines to serve 17.5 million additional customers. Pipes that may no longer be fit for service are being replaced with ones made from more modern materials. Thanks to these efforts, there are over two million miles of plastic and protected steel main and service pipeline in the natural gas system today.

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Decisions to replace pipe are rooted in enhanced risk-based integrity management programs. America's natural gas utilities work with their state regulators, legislators and other key stakeholders to advance important safety policies that both enhance system integrity and support increased access to natural gas service for homes and businesses. The incredible progress in this area is due primarily to a common set of goals and values shared by utilities, regulators and legislators. Each stakeholder is committed to increasing both pipeline safety and affordable access to our nation's abundance of clean natural gas. All involved are now taking an even more holistic and proactive approach toward looking at this issue, recognizing that today's low natural gas prices provide a good opportunity to focus on this issue and dedicate resources to replacement, in order to mitigate rate impact to the consumer.

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The Declining Trend of Natural Gas Emissions

This concerted effort by natural gas utilities to upgrade our nation's pipeline network in order to enhance safety has also contributed significantly to a declining trend in emissions from the natural gas distribution system.

0.24%

Only 0.24 percent of produced natural gas is emitted from the delivery systems operated by local natural gas utilities.

According to the U.S. Environmental Protection Agency's 19th Annual Inventory of U.S. Greenhouse Gas Emissions and Sinks released in April 2014, only 0.24 percent of produced natural gas is emitted from the delivery systems operated by local natural gas utilities. In fact, natural gas emissions from utility-owned distribution systems have dropped 22 percent since 1990. Moreover, nearly 90 percent of the emissions declines from distribution systems since that year are due to pipeline replacements.

These emissions reductions include those achieved by EPA's Natural Gas STAR program. AGA and many of its member companies were involved in the development of, and have been partners in, this program since its inception in 1993. They are committed to improving the environmental performance of natural gas through the implementation of cost-effective technologies and practices to reduce emissions of methane, a greenhouse gas.

In May 2014, the Board of Directors of the American Gas Association approved a set of voluntary guidelines that may lead to further emissions reductions. The report will serve as a resource for AGA members to assist in evaluating potential options for continuing to reduce the already low natural gas emissions from distribution systems.

Natural gas utilities are regulated by state utility commissions which are charged with balancing the need for investments in infrastructure to provide safe and reliable service with ensuring affordable energy bills for customers and fair returns on equity that will attract capital at reasonable costs.

In July 2013, the National Association of Regulatory Utility Commissioners (NARUC) approved a resolution encouraging state regulators and industry to consider sensible programs aimed at replacing the most vulnerable pipelines as quickly as possible and to explore, examine and consider adopting alternative rate recovery mechanisms in order to accelerate the modernization, replacement and expansion of the nation's natural gas pipeline systems.

Additionally, the American Gas Association and 13 of its members are working with Washington State University on a nationwide field study, with coordination and support from the Environmental Defense Fund, to better understand emissions associated with the distribution of natural gas. It is our hope that the results will not only help our efforts to further identify and measure sources of emissions, but also that the science that has been pioneered by this study will aide EPA and others with their emissions detection work.

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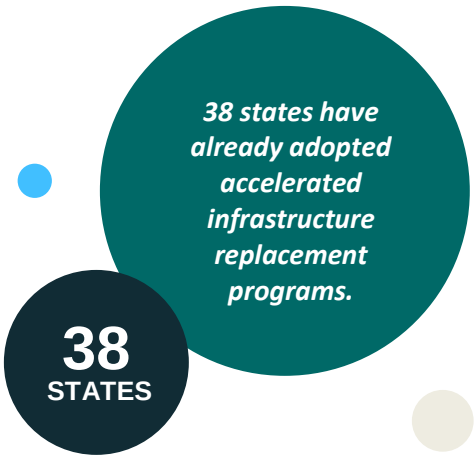
Accelerated Replacement



The effort to modernize infrastructure by replacing pipe no longer fit for service according to risk will continue to grow. Of the 38 states that have accelerated infrastructure replacement mechanisms, 9 states and the District of Columbia were approved in the past 18 months. As those programs ramp up, we will see more investment in enhancing safety and further emissions declines.

Clearly, the efforts being made to help ensure the ongoing safety, reliability and resiliency of our nation's natural gas distribution system are working – as the industry's safety record continues to improve. The success of these efforts is grounded in the individualized nature of each integrity management program and the unique circumstance of the utility and their service territory. Each local utility commission is in the best position to balance the safety of the energy infrastructure and the best interests of customers. Natural gas utilities will continue to support this model and the constructive working relationship between companies and their utility commissions.

Two programs adopted recently are illustrative of this individualized approach and the investment needed for accelerated replacement activities:

In Washington, DC, Washington Gas Light Company received approval to implement the first five years of a 40-year Accelerated Pipe Replacement Plan. The company will spend $110 million during this five-year period and their program is designed to reduce risk and enhance safety by replacing aging, corroded or leaking pipe in their natural gas distribution system. Three segments were approved in this first phase with associated costs: 1. Replace a yet undetermined number of bare and/or unprotected services ($40 million); 2. Replace 18 miles of bare and unprotected steel main and a yet undetermined number of services ($32.5 million); 3. Replace 20 miles of cast iron mains ($37.5 million).

The New Jersey Board of Public Utilities approved Public Service Electric and Gas Company (PSE&G) for their Energy Strong infrastructure improvement program and associated surcharge mechanisms in May 2014. This service area was hit hard by Superstorm Sandy. PSE&G agreed to improve its electric infrastructure over a five-year period and its natural gas infrastructure over a three-year period. Their local regulators gave the company a 9.75% return on equity for the first $1 billion of investment through an accelerated recovery mechanism. Following that, the utility will seek to recover the remaining $220 million approved in a base rate case to be filed no later than November 2017. Through the approved program, PSE&G will take the following steps at the approved costs: 1. Raise, relocate or protect 29 switching and substations that were damaged by water in recent storms ($620 million); 2. Replace and modernize 250 miles of low-pressure cast iron gas mains in or near flood areas ($350 million); 3. Create redundancy in the system, reducing outages when damage occurs ($100 million); 4. Deploy smart meter technologies to better monitor system operations and to increase its ability to more swiftly deploy repair teams ($100 million); 5. Protect five natural gas metering stations and a LNG station affected by Superstorm Sandy or located in flood zones ($50 million).

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Moving Forward

These accelerated replacement programs, many just underway, will modernize the infrastructure, resulting in the continued decline of emissions for decades to come. AGA will continue to work with NARUC, and utilities will continue to work with their state regulators and legislators to encourage effective programs that help ensure safety and reliability while balancing the cost to the consumer.

AGA will work with DOE, state regulators and other stakeholders to communicate why natural gas should be part of an overall national energy policy and the importance of expanding access of this foundation fuel to all Americans.

AGA supports DOE's efforts to provide forums for state regulators and industry to exchange information about the significant initiatives that are underway to more accurately understand current downstream natural gas emissions and to further reduce these emissions.

AGA will work with DOE, state regulators and other stakeholders to communicate why natural gas should be part of an overall national energy policy and the importance of expanding access of this foundation fuel to all Americans.

AGA will continue to encourage and support DOE and other organizations' fact-based research to assess sources of natural gas emissions and identify opportunities to reduce emissions. Research and development focused on enhanced, cost-effective technologies to detect, measure, and reduce natural gas emissions from distribution systems will also be key to achieving our shared goals.

The emissions reductions guidelines approved by the AGA Board of Directors in May 2014 will be a cornerstone of the curriculum at a variety of industry forums and a foundation for the sharing of best practices among LDC's.

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On behalf of the U.S., AGA will hold the Presidency of the International Gas Union beginning next year. AGA will work with DOE to use this opportunity to facilitate the exchange of global best practices to reduce methane emissions and our story of a strident focus on safety and its co-benefit of emissions reduction will serve as an example of American leadership and a model for our colleagues in the global natural gas industry.

AGA has created a $1 million scholarship program expected to benefit more than 200 students.

$1 MILLION

AGA will also continue to work with NARUC, the National Governors Association, the National Association of State Energy Officials, the National Conference of State Legislatures, the Council of State Governments and other important organizations in encouraging expansion of the natural gas infrastructure to help ensure that more homes and businesses have access to this safe, affordable, reliable and clean energy source, recognizing that a modernized infrastructure will have lower methane emissions.

The critical and important work of replacement, expansion and emissions declines is also generating jobs. The utility industry has made a significant investment in programs to educate and grow a workforce capable of maintaining the 21st century technology that transports and utilizes natural gas. For example, AGA announced the creation of a $1 million scholarship program in April 2013 as part of the 17th International Conference and Exhibition on Liquefied Natural Gas (LNG17). AGA expects that more than 200 students will benefit from these scholarships over the next five years as they plan for careers working for companies that safely and reliably deliver natural gas to homes and businesses. AGA worked with member companies to identify schools in their communities that prepare students for careers in HVAC, welding, pipefitters, mechanical/petroleum/chemical engineering and other engineering fields. More than two dozen U.S. colleges and universities from across the country were selected to participate.

Photo: Corky Miller

AGA is also actively engaged in the Center for Energy Workforce Development (CEWD), a collaborative effort between natural gas, electric and nuclear utilities and labor groups to help ensure a skilled energy workforce for the future. Most recently, CEWD developed a natural gas boot camp that provides condensed training for workers interested in working in the natural gas industry.

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